

Title (en)

Wavelength routing and switching mechanism for a photonic transport network

Title (de)

Wellenlängen Leitweglenkung und Vermittlungsmechanismus für ein optisches Transportnetzwerk

Title (fr)

Routage par routeur d'onde et mécanisme de commutation pour un réseau de transport photonique

Publication

EP 1303160 A2 20030416 (EN)

Application

EP 02011669 A 20020531

Priority

US 90926501 A 20010719

Abstract (en)

A connection between a source node and a destination node is automatically routed and switched in a WDM photonic network 1, on receipt of a connection request. A switching and routing mechanism selects a plurality of valid link paths using a path tree, where invalid branches are eliminated based on constraints received with the connection request, and on a link and path cost functions. A regenerator placement tree 25 is used for determining a plurality of viable regenerator paths for each valid link path. On the regenerator placement tree 25, non-viable branches are eliminated based on constraints received with the request and on regenerator availability at the intermediate nodes along the respective path. Next, the switching and routing mechanism assigns a set of wavelengths to each viable regenerator path, and estimates the performance of the path using a Q calculator 39. The regenerator paths are ordered according to their performance and the switching and routing mechanism 30 attempts to setup a path to serve the request.

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H04Q 11/00

IPC 8 full level

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Cited by

EP2702714A4; CN102316390A; EP2562950A4; DE10333805A1; DE10333805B4; EP1639757A4; EP2439887A4; EP1580913A3; EP3300269A1; US8369707B2; WO2011153881A1; WO2008077420A1; US6996342B2; US10880034B2; WO03009509A3; WO2018055042A1

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